

TWO NEW GENERA OF THE FAMILY THERIDIIDAE (ARACHNIDA: ARANEAE) FROM INDIA

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ABSTRACT

Coscinida Simon, 1895 and *Emertonella* Bryant, 1945, are recorded for the first time from India. Female specimens of both the genera viz. *C. tibialis* Simon, 1895 and *E. taczanowskii* (Keyserling, 1886) are collected from comparatively dry area of Melghat region of Satpuda landscape and are redescribed.

Keywords: Theridiidae, *Coscinida* Simon, 1895, *Emertonella* Bryant, 1945, new record, Satpuda, Taxonomy.

INTRODUCTION

Coscinida Simon, 1895 and *Emertonella* Bryant, 1945, are the genera from family Theridiidae. *Coscinida* Simon, 1895 is represented by 16 species worldwide while *Emertonella* Bryant, 1945, is represented by 4 species worldwide. Both these genera as well as species are first time reported from India.

MATERIALS AND METHODS

Both the species were collected by hand during December, 2014 from Melghat region of Maharashtra, India. Photographs of live specimens were taken with Fugi camera. The material was preserved in 80% alcohol with all legs spread properly. Female epigyne was cleared *in situ* with 1% KOH. All measurements are in mm. Leg measurements are given (including Coxa, Trochanter, Femur, Patella, Tibia, Metatarsus and Tarsus). The terms used in the genital descriptions follow Levi (1982).

Abbreviations used: S: Spermathecae; Ef: Epigastric furrow; Fd: Fertilization duct; Cd: Copulatory duct.

Taxonomy

a. Coscinida tibialis Simon, 1895 *

(Figures 1-4)

Material Examined: Female

General Description: Small, ecribellate spider with female comparatively darker than male, compact eyes, comparatively longer legs while abdomen with scattered white spots and is also longer than wide.

Total body length: 3.67mm.; Carapace (L: 1.23, W: 0.69); Abdomen (L: 2.44, W: 0.62);

Cephalothorax: Carapace nearly oval, grayish brown with faint striations. Cephalic and thoracic region roughly demarcated, posterior region of the carapace is quite depressed. Eyes compactly arranged on a comparatively raised area and the ocular region is surrounded by black colour. All eyes almost



Figure - 1, *Coscinida tibialis* Simon, 1895 Habitus, Female

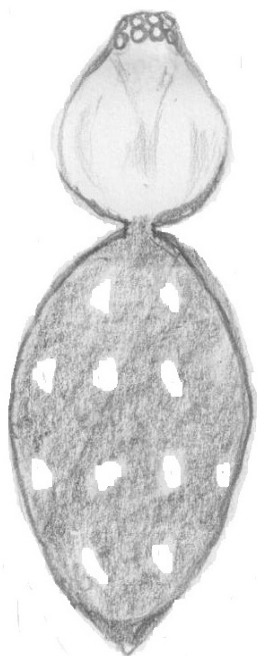


Figure - 2, *Coscinida tibialis* Simon, 1895
Female: Cephalothorax and Abdomen

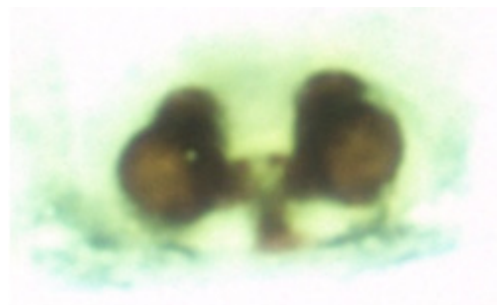


Figure - 3, *Coscinida tibialis* Simon, 1895
Epigyne-Dorsal view

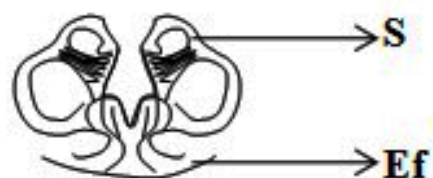


Figure - 4, Epigyne-Dorsal view
S: Spermathecae; Ef: Epigastric furrow



Figure - 5, *Emertonella taczanowskii* (Keyserling, 1886)- Habitus (female)

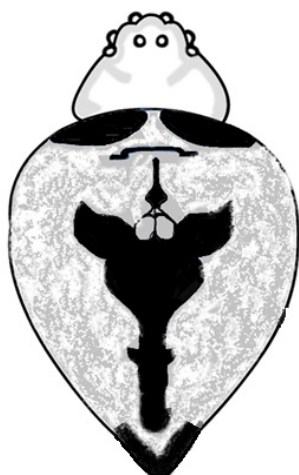


Figure 6, *Emertonella taczanowskii* (Keyserling, 1886) Female Cephalothorax and Abdomen

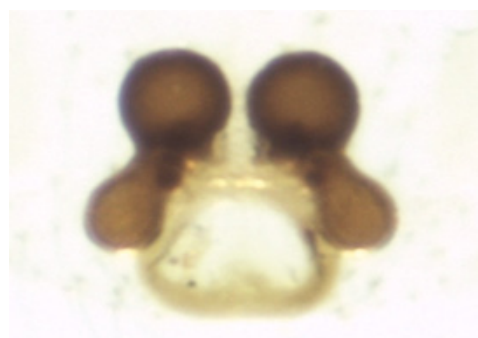


Figure - 7, *Emertonella taczanowskii* (Keyserling, 1886) Epigyne-Dorsal view

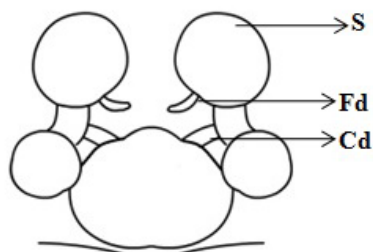


Figure - 8, Epigyne-Dorsal view
S: Spermathecae; Fd: Fertilization duct;
Cd: Copulatory duct.

similar in size except AME which are the smallest. PME comparatively large and separated and are closer to the laterals than each other. Clypeus without any modification but with distinct recess below eye region. Shallow, longitudinal, pit-shaped fovea. Sternum light coloured, nearly triangular in shape, clothed with few hairs, absence of sinuous sides, but with faint lines. Sternum broadened apically and tapering posteriorly and ending beyond coxae IV. Scattered light dots can be noticed on the surface of sternum.

Mouthparts: Chelicerae moderately developed, elongated, brown coloured, nearly parallel lateral sides, slightly broadened base, narrowing apically and finally ending in a small, fang. Maxillae grayish in appearance, deeply converging and provided with depleted scopular hairs. Labium appears to be fused with the sternum, but distinct lateral borders can be noticed, labium lacking any scopular hairs but is furnished with scattered fine hairs.

Appendages: Legs long, 3 clawed, light brown coloured, furnished with spines. Legs are stronger and comparatively darker in female. Tibia of Leg 1 of female comparatively darker and quite strong than male. Absence of trichobothrial hairs on femur but single row can be seen on patella, tibia while double row on metatarsus and tarsus. Claws 3, superiors equal in size, without dentations while 3rd claw small and hook shaped.

Leg measurements: I :3.95 (0.43, 0.33, 1.14, 0.32, 0.71, 0.53, 0.49); II:3.74 (0.42, 0.32, 1.02, 0.31, 0.73, 0.48, 0.46); III : 3.27 (0.31, 0.30, 0.96, 0.30, 0.57, 0.42, 0.41); IV: 4.57 (0.44, 0.34, 1.19, 0.33, 0.75, 0.79, 0.73). Leg formula- IV, I, II, III

Abdomen: Abdomen slender and tapering, decorated with scattered whit spots of variable sizes on dorsum (app. 6-9). Dorsum furnished with numerous hairs. Ventrums, comparatively lighter in shade, lacking any spots. Spinnerets well developed; with light brownish to grayish shade and lacking any further outer modifications. Colulus indistinct.

Genitalia: Epigastric area well developed with moderately sclerotised epigyne, atrium indistinct and the Epigyne is divided by two sclerotised midline ridges. Copulatory orifices indistinct, copulatory ducts narrow and closely associated with the spermathecae while fertilization ducts very narrow and small.

***b. Emertonella taczanowskii* (Keyserling, 1886)**

(Figures, 5-8)

Material Examined: Female

General Description: Small spider with shiny abdomen and black carapace, legs of moderate length, paler and with mild annulations (spots).

Total Body Length: 3.28mm, Carapace (L: 1.01; W: 1.00); Abdomen (L: 2.13; W: 1.81).

Cephalothorax: Carapace dark brown, longer than wide. Cephalic region demarcated less in area and highly elevated. Carapace lacking any markings or bandings but is furnished with long, converging white hairs especially near the ocular region. Fovea indistinct. Eight eyes, all eyes equal in size, paler in appearance, almost round. Ocular quad. nearly square with equally spaced medians. Laterals placed close but not fused. Clypeus elevated and placed away from anterior medians as that of the distance between the anterior medians. Sternum, nearly shield shaped, brown, glabrous and lacking hairs, anteriorly straight while posteriorly tapering, without any sinuous sides.

Mouthparts: Chelicerae, short, cheliceral furrow moderately developed, without any teeth. Fang long, transparent and is nearly equal to the length of the chelicerae. Maxillae and labium quite small, maxillae long with broad base while tapering proximal region and presence of scopular hairs. Labium on the other hand, quite small, nearly triangular, brownish in shade, lacking hairs or spines.

Appendages: Legs, slender with pale and black coloration, three simple claws. Leg segments coxae, trochanter and femur are pale white while other segments, dark. Legs decorated with pale and long spines. Trichobothria present on metatarsus and tarsus segments. Female palp well developed, presence of paler and black segments similar that of the legs and armed with a highly dentate claw.

Leg measurements: I: 3.30 (0.24; 0.22; 0.68; 0.22; 0.74; 0.74; 0.46); II: 3.65 (0.28; 0.25; 0.84; 0.35; 0.71; 0.78; 0.44); III: 3.53 (0.26; 0.24; 0.82; 0.33; 0.68; 0.76; 0.44); IV: 4.01 (0.28; 0.25; 0.98; 0.38; 0.62; 0.92; 0.58). Leg formula- IV,II,III,I

Abdomen: Abdomen, dorsum of abdomen shiny and lustrous, furnished with scattered hairs. Middle of dorsum showing a nearly 'Y' shaped black mark while 2 black round spots at the anterior lateral tips. Ventrums, ventral side of the abdomen showing segmentation and is decorated with two latitudinal silvery lines.

Genitalia: Epigyne slightly sclerotised and appears like a large, hollow depression. Dorsally, simple sclerotisation, inverted club-shaped in appearance. Surroundings of the epigaster are comparatively clean. Internally, opening to anterior margin of the atrium, spermathecae nearly round with short fertilization ducts while copulatory ducts comparatively bigger than fertilization ducts.

Remarks: *Coscinida* Simon, 1895 is considered a senior synonym of *Loxonychia* Tullgren, 1910 and *Theridiella* Tullgren, 1910 by Levi & Levi, 1962: 23, 30. Similarly *Emertonella* Bryant, 1945: 182 is a type of *Euryopsis emertoni* Bryant, 1933 and is raised as separate genus by Bryant in 1945 and further removed from the synonymy of *Euryopsis* Menge, 1868 by Yoshida, 2002: 17, contradicted by Levi, 1954: 3. This species *Emertonella taczanowskii* (Keyserling, 1886) was transferred from *Euryopsis taczanowskii* Keyserling, 1886.

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